RAPIDLY CHANGING, SEVERE, SOMETIMES HIDDEN CONDITIONS CAN MAKE WINTER DRIVING DEADLY

V Corps Safety Office release

Rapidly changing conditions can make winter driving in Europe hazardous, maybe even deadly, for unsuspecting drivers.

Rain, fog, snow and ice, heavy seasonal traffic and sudden stops cause many Soldier, civilian employee, and family member accidents each year.

The good news is that many of these accidents are preventable. Drivers who are alert and prepared for harsh winter conditions have the best chance of avoiding injury to themselves and others.

Good general rules for winter driving are to:

-- plan ahead

-- reduce speed

-- drive defensively

-- allow extra stopping distance

-- avoid abrupt vehicle handling (such as acceleration, turns or passing)

-- get plenty of rest before and during extended driving trips

-- keep the gas tank at least half-full at all times

-- use seat belts

-- never drink and drive

What follows is a discussion of some typical driving conditions that can be expected in winter in Europe, and recommended precautions drivers can take for each.

Fewer hours of daylight

In the central Europe in winter, most Army personnel begin a normal duty day in darkness and go home in darkness.

In darkness a driver's field of view is limited to the range of his vehicle's headlights. Drivers should avoid driving faster than they can react to obstacles that may emerge at the limit or boundary of the headlights.

Vehicle lights should be kept clean, in good condition, and properly aimed. Windshield wipers and defroster should be in good working order.

Fog

Fog can form quickly and may reduce visibility to zero. It is a major hazard on European highways and contributes to many multiple vehicle accidents each year. When fog is expected:

-- Consider postponing your trip until the fog clears.

-- Slow down before you enter a patch of fog. A good general rule is to adjust speed to visibility. The reflecting poles beside the highway can help you estimate visibility. The distance between two poles on autobahns is 50 meters or 25-50 meters on rural highways.

-- If your vehicle is equipped with fog lamps, turn them on.

-- Be sure that you can stop within the distance that you can see.

-- Turn on the wipers and defroster to remove moisture from the windshield.

-- Use your low-beam headlights, whether it is day or night. Do not use high-beams; they reflect off the fog and can reduce visibility.

-- Use the right edge of the road or painted road markings as a reference.

-- Watch out for slow-moving, parked, or stopped vehicles.

-- Do not change lanes or pass other vehicles unless absolutely necessary.

-- If you must pull off the road, signal, and then carefully pull off as far as possible. After pulling off the road, turn on your hazard flashers and place your warning triangle between your car and oncoming traffic.

Rain

Long periods of rain can lead to flooding and standing water on the roads. Heavy rains can reduce a driver's visibility to dangerously short distances and make roadway markings and other traffic difficult to see. But even thin layers of water on the road can create dangerous conditions. Water mixed with roadway dirt and oil can create slick surfaces.

Wet brakes can increase stopping distances.

Hydroplaning can occur when the tire's tread cannot remove the water from underneath the tire fast enough. The tire begins to ride on top of a ridge of water and loses contact with the ground, which can cause the driver to lose control of the vehicle. The combination of fast speeds and wet European highways results in many hydroplaning accidents each year. Many variables lead to hydroplaning, but slower speeds and good tires are the best ways to prevent it.

The following safety tips should be used when driving in wet weather:

-- Most important, slow down.

-- Follow vehicles using the three- (or more) second rule of spacing. Pick a landmark by the roadside, and begin counting as the car ahead passes it. You should be counting three as your vehicle passes the landmark.

-- Try to follow in the tracks of the vehicle in front of you.

-- Avoid hard braking; take your foot off the accelerator to slow down.

-- Make sure your tires and windshield wipers are in good condition.

-- Drive with your headlights on in wet weather.

-- Never drive beyond the limits of your visibility.

-- Never drive through moving water or puddles that touch your vehicle's frame.

-- Beware of high winds during storms.

Ice

Icy conditions can be expected any time the outside air temperature is 40 degrees Fahrenheit (4 degrees Celsius) or less.

Although water freezes at 32 degrees Fahrenheit (0 degrees Celsius), road surfaces can freeze when the air temperature drops to 40 degrees Fahrenheit. Bridges are particularly susceptible to this condition. Bridge surfaces are exposed to the wind and cool off faster than the rest of the road.

Freezing rain can glaze road surfaces with ice, causing extremely hazardous driving conditions.

Some general rules when roads are icy or slushy:

-- It can take 10 times longer to stop in icy conditions than on a dry road. Drivers should move more slowly and allow extra room to slow down and stop.
-- Using the highest gear possible will help keep wheels from spinning on ice, and lower than usual gears will help slow a vehicle without braking. Low gears should be avoided, and overdrive should not be engaged.
-- Harsh braking, acceleration and steering maneuvers should be avoided.
-- If a skid, a driver should ease off the accelerator, but not brake suddenly, and steer into the skid -- if the vehicle is skidding to the left, steer left; if it is skidding to the right, steer right.
-- If a vehicle gets stuck in the snow, kitty litter, old newspapers, salt, sand, or a traction mat should be placed in front of and behind the drive wheels.

There are actually several different types of ice that can form on roadways, and all are dangerous:

Black ice. Black ice occurs when condensation such as dew and fog freezes on road surfaces at temperatures of 32 degrees Fahrenheit (0 degrees Celsius) or below. Drivers should be particularly alert for black ice when temperatures drop suddenly. When frost or ice forms on car windows or roadside vegetation, conditions are right for black ice. These conditions can create an extra-thin layer of ice on the road that may be difficult to see because it has a watery look and reflects the light of headlights off the surface. Pavement areas that look dry, but are darker than the adjacent surfaces and appear clear or shiny should alert drivers to the possibility of black ice. Black ice is one of the most slippery road conditions. Black ice is likely to form first under bridges and overpasses, in shady spots, and at intersections.

To help mitigate the slippery effects of black ice, drivers should slow down, anticipate any stops they might have to make, and apply brakes sooner than normal to help prevent loss of control. When braking in a car without antilock brakes, brake carefully with short, rapid applications of the brakes. When driving a vehicle with ABS, apply the brakes hard to ensure all four wheels brake.

Drivers can downshift to use their car's transmission to help slow it down. Even drivers of cars with automatic transmissions can shift into lower gears, usually shown by markings such as "D1" or "D2" on the gearshift indicator.

On black ice, drivers should steer gently in the direction they want to go, and avoid making quick turning maneuvers.

Glare ice. Glare ice is a slippery spot that may appear on an otherwise clear road. It is most common in shaded areas where a cold wind can freeze a wet road surface quickly. Drivers should brake before reaching a patch of ice and try not to brake while actually on the ice.

White ice. White ice results when compacted snow melts slightly and then freezes. This ice can usually be seen on the road. When traveling on white ice, drivers should move very slowly. If possible, they should install tire chains for better traction.

Snow

In wintertime Europe drivers must take plenty of extra caution, and be prepared to use alternate routes and spend time in traffic jams.

Falling snow can reduce driver visibility, especially when it is windy, and drastically after dark.

Snow can accumulate very quickly as well, especially at higher elevations, and cause slippery driving conditions. Roadways on hills are frequently blocked by heavy vehicles unable to maneuver until road crews arrive to plow and spread abrasives to improve traction.

Drifting snow can become very deep on roads at all elevations. Snowdrifts can be a very serious hazard to drivers, because they can render any vehicle immobile and lead to very large traffic jams.

Proper use of snow chains can make driving in the snow safer. In many places snow chains can be rented from gas stations and dropped off at another station down the road. Sometimes membership in one of the European-based automobile clubs is necessary for this service, but not always. The cost is generally low and is based on the number of kilometers traveled. Drivers should not hesitate to get chains if they think they need them, because supplies are generally limited at each station. Chains can also be purchased in the proper size for each vehicle. It's a good idea for drivers to practice installing them before it begins to snow.

Drivers should keep the following safety tips in mind when driving in snowy conditions:

-- Slow down and back off. A good rule of thumb is for a driver to triple the usual distance between his car and the one ahead.

-- Stay in the plowed lane and avoid driving over the ridges between plowed areas. Drivers should signal for lane changes and move over slowly.

-- Drivers of cars not equipped with antilock brakes should not pump the brakes, to avoid locking them up. If the brakes lock, the driver should take his foot off the brake pedal for a moment. If a vehicle has an anti-lock braking system, the driver should press the brake pedal and hold.

-- Drivers who get into fender-benders should move their vehicles out of the lanes of travel.

-- It's a good idea for drivers to keep a winter safety kit in their vehicles that includes at least a blanket; traction pad, cat litter or sand for traction; a tool kit, and a flashlight. (See the article on this page about winterizing vehicles for more.)

-- While driving, drivers should keep their headlights on and make sure to clean snow and ice off mirrors, windows and lights.

Fatigue

Safe driving demands a driver's full attention. Fatigue on the road can be a killer.

Fatigue happens frequently on long drives, especially long night drives. The extended hours of darkness, heavy traffic and poor weather conditions of wintertime can increase a driver's stress and produce fatigue.

Signs of fatigue include back tension; burning eyes; shallow breathing and inattentiveness. A tired driver may start becoming erratic, drifting, driving at an abnormal speed, tailgating, or failing to obey traffic signs.

Alcohol consumption also increases fatigue. Alcohol is a depressant, so drivers do not have to be drunk to fall asleep at the wheel. Even one drink can be too many.

The National Safety Council offers these tips for staying awake while driving:

-- Drivers who have not received 7 or 8 hours of sleep the night before a trip are likely to experience fatigue. Trips should not be started late in the day or in the evening.

-- If possible, drivers should not travel alone. Passengers can take turns driving and help keep the driver awake.

-- Avoid long drives at night. The glare of lights increases the danger of “highway hypnosis.” Falling snow can cause hypnosis as well.

-- Drivers should adjust their position and their car’s environment to help keep them awake and alert. The temperature should stay cool. Windows can be opened as necessary for a crisp breath of air. The radio volume can be turned up and the station switched frequently, but drivers should avoid soft, sleep-inducing music. Chewing gum, stretching the legs, and singing or talking can help as well.

-- On potentially tiring drives, a driver should keep his eyes moving and maintain good posture, with head up, shoulders back, and buttocks tucked against the seat back. Legs should not be fully extended, but flexed at about a 45-degree angle.

-- Drivers should take frequent breaks, stopping at a gas station, restaurant or rest area at least every two hours and getting out of the car to walk, jog, do calisthenics or have a light meal or snack.

-- Speed should be varied, and cruise control should not be used.

-- Drivers should not allow their eyes to become fatigued or hypnotized. Squinting caused by glare increases the chances of falling asleep. Sunglasses should be worn during the day when necessary.

-- If anti-fatigue measures fail and a driver starts to notice the danger signs of fatigue, there is only one solution: sleep. Good planning can help drivers avoid fatigue and can help ensure a safe trip.


IT WILL BE DONE